(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property **Organization**

International Bureau



(43) International Publication Date 15 April 2004 (15.04.2004)

PCT

(10) International Publication Number WO 2004/032506 A1

(51) International Patent Classification⁷:

H04N 7/12

(21) International Application Number:

PCT/US2003/028274

(22) International Filing Date:

10 September 2003 (10.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/415,443

1 October 2002 (01.10.2002) US

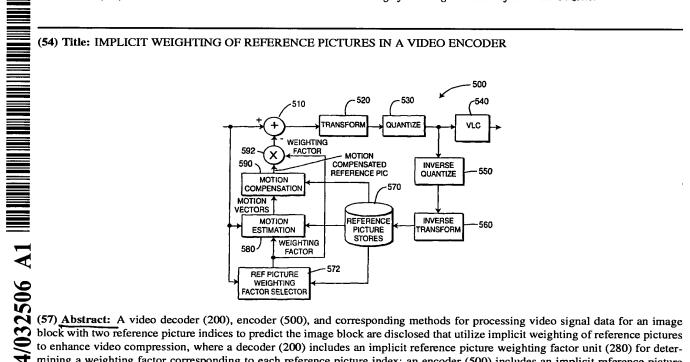
- (71) Applicant (for all designated States except US): THOM-SON LICENSING S.A. [FR/FR]; 46, Quai A. Le Gallo, F-92648 Boulogne (FR).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): BOYCE, Jill, Mac-Donald [US/US]; 3 Brandywine Court, Manalapan, NJ 07726 (US).
- (74) Agents: TRIPOLI, Joseph, S. et al.; Thomson Licensing Inc., Two Independence Way, Suite #200, Princeton, NJ 08540 (US).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



to enhance video compression, where a decoder (200) includes an implicit reference picture weighting factor unit (280) for determining a weighting factor corresponding to each reference picture index; an encoder (500) includes an implicit reference picture weighting factor assignor (572) for assigning a weighting factor corresponding to each reference picture index; and a method for decoding includes receiving the reference picture indices with the data that corresponds to the image block, determining an implicit weighting factor responsive to the relative positioning of the image block and the reference pictures indicated by each reference picture index, retrieving a reference picture for each index, motion compensating the retrieved reference pictures, and multiplying the motion compensated reference pictures by the corresponding weighting factor to form weighted motion compensated reference pictures.

